CHICAGO HOUSING AUTHORITY

TESTIMONY TO HOUSE SUBCOMMITTE ON ENERGY AND POWER

Chicago, Illinois

May 2, 1997

The Chicago Housing Authority (CHA) is a municipal corporation organized under the laws of the State of Illinois, pursuant to the Federal Housing Act of 1937, as amended. The CHA is e direct recipient of federal subsidy and is chartered to provide decent, safe end affordable housing for the low-income community. The CHA does not receive grants or subsidy from state or city governments. The CHA is the second largest housing authority in the continental United Stetcs and administers over forty-thousand (40,000) units of low rent public housing in the City of Chicago.

The CHA has an annual Federal Operating Program budget for lower-income public housing of approximately $210 million of which it receives $166 million (approximately 80%) in subsidy from the U.S. Department of Housing and Urban Development (HUD). Thc CHA is also eligible for Comprehensive Grant funding which is used to provide for rhc rehabilitation of the physical needs of its development buildings and to finance management improvements.

The CHA has been recognized as a leader among public housing authorities in the area of energy cost reduction, and has helped to define and establish HUD incentives to benefit housing authorities that take action co reduce their costs and use of energy. The CHA

established the first "Wellhead" purchase of natural gas in October 1988, and has saved more than $73 million under that program. Under the HUD incentive, savings are shared equally between the CHA nnd the HUD Secretory. CHA's staving share is used to improve its properties, reduce vacancies, correct building code violations and to fund drug elimination programs. This is the only method by which a public housing authority can generate additional discretionary funding for itself. Funding provided by Congress to modernize units has been reduced and is clearly inadequate to meet the accumulated backlog of rehabilitation needs of the public housing program. The CHA has undertaken to bring in additional funds, through the HUD incentives, to help leverage its modernization funding.

In April 1996, the CHA entered into a Memorandum of Understanding (MOU) with the U.S. Department of Energy (DOE) to reduce energy consumption at CHA operated properties. The goal of the MOU is to reduce energy consumption by 30 percent (30%) in half of all CHA-operated facilities by the year 2000. The CHA developed a multi-year plan to achieve this goal (exhibit I) and it includes the following actions:

- CHA committed to purchase and install 10,000 super efficient refrigerators by winter, 1997

- **Planning** to enter into an cncrgy performance contract at four **dcvclopments (three family** and one senior development) which will **bc thc** largest contract of **this** type awarded in **thc** U.S.

- **Will** purchase **and install energy efficient** lighting in the halls and common areas of all **scnior** developments, **representing** nearly **ten-thousand** (10,000) dwelling units

- **Initiated** a program for training of **CHA** heating plant operators to stimulate **energy** awareness and focus on efficient **operation**

- Working with the Chicago **Dcpartmcnt** of Water to **install water conserving dcvicc**s at residential **facilitie**s

- Developing a program to initiate resident training in **energy** conservation **and** to perform in-unit modifications to improve resident **comfort** and reduce utility use and cost

CHA's Wellhead Program to reduce its cost of natural gas is **thc direct** result of federal deregulation legislation of the 1980's. Similar to that effort, CHA undertook to dctcrminc if its costs of **electrical power** could be **reduced**. CHA determined the following:

- CHA is exempt from Illinois Commerce Commission (ICC) regulation due to its status as a municipal corporation

- CHA is a significant power user due to its residential operations, using approximately 140 million kilowatthours of electricity annually

. CHA monthly gross billing demand averages approximately 21 megawatts

. Annual electrical power costs are appmximotely $10 million

. CHA owns and operates distribution systems that serve many of it developments

. CHA redistributes power to a significant portion of its residential population

- CHA directly provides many utility services including power distribution system maintenance. repair and meter reading

- Economic purchases of power qualify as Kate Reduction under HUD incentive guidelines. making CHA eligible to retain half of all savings generated

- Furthers national goals of reducing the cost of government os the savings would be split with the HUD Secretary

- **Benefits residents** through **funding** of physical **improvements** to **CHA properties**

In April 19%. the Federal Energy Regulatory Commission **(FERC)** issued Order **No. 888** which opened **wholesale** power sales to competition and **required** public utilities **owning,** controlling or **operating** transmission lines to **file** nondiscriminatory open access **tariffs** that offer other **providers** the same **transmission service the local utility provides** for itself This **action** opened the market to **increased** wholesale power transactions by eliminating, to a large extent, utility **barriers** to **open access** power transmission.

Research undertaken by specialized legal counsel on behalf of the CHA indicated that CHA could be more properly characterized as a **wholesale power provider and is therefor** eligible to engage in wholesale power transactions. Based on **the cost savings potential** of this opportunity, the CHA prepared to issue a Request for **Proposals (RFP)** seeking reliable and competitively priced sources of electrical **power. Prior to** issuance of the RFP, Commonwealth Edison **Company (ComEd)** met with CIIA to discuss the possibility of a favorable rate which would directly benefit CHA. However, CHA and ComEd were unable to arrive at an agreement which would have been beneficial to CHA and meet the requirements of HUD's Rate Reduction incentive.

CHA issued the RFP in October 1996 to fourteen (14) firms which bad been prequalified. In January 1997 the CHA identified Wisconsin Electric Power Company (WE) as the recommended vendor. In order to bring WE power to CHA it will be necessary to use

ComEd's transmission lines. This requires CHA to complete a power transmission (wheeling) application with ComEd. CHA and WE are in the process of gathering information which will satisfy the requirements of the wheeling application.

ComEd has indicated that it does not believe that CHA is entitled to transmission service in connection with CHA's proposed purchase of off-system power, and has further indicated that it is prepared to strenuously resist CHA's efforts to import power through its transmission system.

Based on the power supply proposal received from WE, CHA should be able to reduce its power costs by 40-50 percent from the costs currently paid to ComEd, including an estimated payment for stranded cost recovery.

The CHA has recommended federal legislation to address this issue and provided additional recommendations which would allow housing authorities to further benefit From the HUD incentives (exhibit 2).

The CHA believes that prompt federal action to restructure the electric industry is needed in order to enable housing authorities, such as the CHA, to gain earlier access to low cost power supplies without costly delays and litigation. The CHA serves the most financially disadvantaged citizens in the City of Chicago, and immediate action is necessary to benefit CHA residents and other financially disadvantaged citizens. The established HUD incentives are the only method by which a housing authority can increase its operating funds. Federal action in this regard will also help public housing authorities to compete for tenants in a competitive market as an efficient provider of energy for economy and resident comfort.

EXHIBIT 1

CHICAGO HOUSING AUTHORITY

MULTI-YEAR ACTION PLAN TO MEET THE TERMS OF THE MEMORANDUM OF UNDERSTANDING BETWEEN Chicago Housing Authority AND United States Department of Energy

The Memorandum of Understanding (MOU) is a voluntary agreement between the United States Department of Energy (DOL.) and the Chicago Housing Authority (CHA) to improve the quality and affordability of public and assisted housing, and to make this housing more competitive with low-income housing in the private market.

The MOU became effective on March 20, 1996. The goal of the MOU is to achieve an average 30 percent efficiency gain in at least one-half of all housing units for which CHA is responsible by the year 2000.

Year 1 - March 20, 1997 to March 20, 1998

Purchase and install 10,000 super efficient refrigerators to replace an equivalent number of older, inefficient refrigerators at selected development locations. Purchase to be financed through an Energy Performance Contract (EPC), thus paying for the refrigerators out of cncrgy cost savings. Average energy savings are estimated to bc 650 kilowatthours (kWhrs) per year per refrigerator for a total of 6,500,000 kWhrs annually.

Implement an EPC with Citizens Conservation Services for four developments (3 family and 1 senior development) to rctiucc cncrgy and water consumption sufficient to recover the cost of project financing.

Purchase and install energy efficient lighting in corridors, stairwells and common areas of senior housing developments. This project may be financed as a stand-alone project or incorporated in a larger EPC. Estimated energy savings are 4,380,000 kilowatthours per year.

Initiate training of powerplant engineers in "Energy Awareness" through energy efficient operation and maintenance techniques. Develop methods, such as comparisons and ratings, to evaluate operational effectiveness of comparable operational units and provide feedback to field supervisors and staff. Estimated annual reduction in gas use is S million therms per year after adjustment for weather variance (7% average annual reduction).

Install water-conserving devices on toilets and faucets through cooperative program administered by the Chicago Department of Water. Installation and maintenance to be provided hy CHA.

Begin decentralization of CHA district heating at ABLA development. Estimated annual energy savings is 1,800,000 therms (20% reduction),

Initiate resident training program in energy conservation to include development of capacity to perform in-unit improvements which will increase resident comfort and reduce utility costs.

Define opportunities and methods for energy efficient retrofit of scattered site housing units. Retrofits will bc implemented for 27 units (11 buildings) in the Habitat Company's scattered site development program for existing buildings. Expected percentage energy reduction is 20 percent from baseline, or 180 therms per unit.

Install energy conservation measures at LeClaire Court Development as units are prepared for purchase by residents. The energy conservation measures will bc identified using home energy rating systems. Expected energy reduction is 120 therms per unit per year, and with 6 16 units this is approximately 74,000 therms per year.

Year 2 - March 20, 1998 to March 20, 1999

Purchase and install 10,000 super efficient refrigerators to replace an equivalent number of older, inefficient refrigerators at selected developments. Purchase to be financed through an EPC. Average energy saving arc estimated at 650 kWhrs per year per refrigerator for a total of 6,500,000 kWhrs annually.

Enter phase two of EPC with sites seicctcd by CHA Modernization as having long-term viability und energy and water savings potential sufficient to recover investment in energy efficiency upgrades.

Continue training of powerplant engineers and reinforce "Energy Awarcncss" through energy efficient operation and maintenance. Increase gas conservation goal to 7 million therms per year after adjustment for heating variance (10% average annual reduction),

Expand resident program to include maintenance of faucets and water saving devices installed in CHA developments

Initiate resident program to include education in energy cost reduction methods and conservation

Apply scattered site retrofit methods to existing units undergoing modernization or entering dcvclopmcnt program. Expected percentage energy reduction is 20 percent, or 180 therms per unit.

Year 3 - **March 20, 1999** to March 20.2000

Purchase and **install** 12,000 super efficient refrigerators **to replace an** equivalent number of older, inefficient refrigerators at **selected development** locations. **Purchase** to be financed through an EPC. **Average** energy savings are **estimated** to be 650 **kWhrs** Per year per **refrigerator** for a total of **7,800,000** annually. **This purchase** should conclude the **upgrading** of the entire **CHA inventory of refrigerators.**

Enter phase three of an **EPC** through a selected vendor with **sites selected** by Modernization as having long term **viability and energy** and water savings potential **sufficient** to mover the **investment** in energy **efficiency** upgrades.

Continue training of powerplant **engineers** and reinforce **"Energy** Awareness" through energy **efficient** operation and **maintenance techniques. Increase gas conservation** goal to 10 million therms **per year after** adjustment for weather variance (14% **average** annual reduction).

Maintain **resident** programs to provide faucet and water saving device maintenance. training in improving **residential comfort** and education in utility cost **reduction** and **energy** and resource conservation.

Apply scattered site **retrofit methods** to **existing units** undergoing modernization or entering development **program**. Expected pcrccntagc energy reduction is 20 percent, or 100 **therms** per unit.

Other Programs

The following programs and initiatives may only impact the cost of power, and arc not energy conservation **programs**. Nonetheless. they represent a significant opportunity for reducing **federally-subsidized** utility costs, the savings of which may be **utilized** in the future to provide public and assisted housing with an additional source to fund energy conservation and related improvements.

Wholesale Purchase of Electrical Power

This opportunity to reduce power costs through a wholesale purchase of electrical power for CHA use and redistribution to residents is currently being tested by **the CHA. If the** CH.4 is **successful,** it may create a precedent which can **be** utilized by other housing authorities.

Bulk Purchase of Natural Gas

Established by **the CHA** in 1988, this **program** has **saved** more than $70 million through 1996. Savings are **shared** equally with HUD, with **the CHA** share used to improve CHA **properties.**

EXHIBIT 2

CHICAGO HOUSING AUTHORITY

FEDERAL LEGISLATIVE AGENDA RECOMMENDATIONS

for

ENERGY CONSERVATION AND COST REDUCTION

Discussion

The Department of Housing and I Jrban Devclopmcnt (HUD) has provided a variety of incentives to induce housing authorities (HA) to promote energy and water conservation and to reduce the cost of energy and water. Though these have met with some success, it is clear that HAs are not maximizing their efforts to fully promote energy and water conservation and cost containment. At the same time, Energy Service Companies (ESCO) have ignored, to a large extent, the potential and opportunities that exist to significantly reduce the use and costofthe energy and water consumed by public housing in the United States.

Performance contracting in the private sector has been slowed as private sector customers consider and anticipate the effect of deregulation in the electric power industry. National organizations which represent ESCOs are encouraging them to consider-the opportunities available in the public sector, including HAs. Whet must be done to help overcome ESCO resistance to contracting with HUD and HAs is to provide additional incentives to ESCOs to reduce HA energy costs by assisting the HA in the competitive purchase of gas and electrical power if the HA does not have in-house capacity to develop and manage cost reduction programs. Many ESCOs are averse to investing in a HA performance contract project because HAs are not credit-rated entities. In addition they have further concerns that contemplated revisions to the Performance Funding System (PFS) may not protect or continue the incentives contained in the current regulations. By enacting legislation to insure the protection of the contracts entered into under the current system und continuation of the incentives in the future, HAs will be in a better position to overcome the perceived impediments and HUD will provide distinct advantage to investment in the public housing market by ESCOs.

In order to fully stimulate HAs and ESCOs to more aggressively pursue energy and water conservation opportunities, a structured proposal to protect and expand the HUD incentives. increase the cost savings pool available to HAs and leverage those cost savings to full scale energy and water conservation projects is prcscntcd both as a package and as individual components.

Recommendations

1. Modify the Federal Power Act to allow HAs which redistribute electrical power to tenant facilities to qualify as wholesale providers of electrical power. Currently, the Federal Energy

Regulatory Commission (FERC) regulates wholesale power transactions. As such, these transactions are exempt from state regulation. By qualifying as a wholesale purchaser of electrical power, HAs may be able to significantly reduce their coat of power, either through non-utility power purchases or through utility negotiation, once it is clear to the local utility that the HA has power purchase options beyond those established by state public utility commissions.

2. Modify HUD regulations to allow HAs to set-aside an amount of their Comprehensive Grant funds to fund a revolving pool of Funds (The Energy Investment Fund) to be used to pay For capital participation in energy conservation projects and allow HAs which are receiving benefits under HUD incentive programs such as Wellhead Gas or Rate Reduction to retain 100 percent of those saving if such net savings were used as dedicated payments into the revolving fund to be used for projects which meet the HUD performance contract criteria. Such projects would be partially funded with funds made available from the Comprehensive Grant pmgmm revolving fund and partially with non-federal ESCO raised funding. Tbc savings from those projects would bc retained only to the extent of the non-federal funding involved, while the retention from the programs cited above would bc used to replenish the funds in the Energy Investment Fund. ESCOs will be stimulated bccausr the HA will, to some extent, be providing the capital to make needed improvements in energy and water using systems. Thus, a continuous dedicated, renewing source of capital funding would be available for energy capital impmvcmenta and the savings gcncrated by the USC of those federal funds would not create windfall savings to the HA, but would be generating savings for the Federal Government.

Like the current program, the ESCO must provide a performance guarantee and contract term limitation would remain at twelve years. Since the HA will be providing a portion of the construction capital through its Energy Investment Fund, it would be permitted to "repay"" the investment to itself over the term of the contract. Since the HA is using savings generated through another program to "repay" the loan to the Energy Investment Fund for the capital funds used for participation in a Performance Contract for other energy improvements, the incentive savings gcncrated by the funded project would be retained by the HA in accordance with existing incentive arrangements. At the end of the term, all parties will have benefited and the HA will have a fully funded Energy lnvcstmcnt Fund available for participation in subsequent energy conservation performance

3. Permit HAs which negotiate power and water rate reduction with local municipally owned utilities IO retain 100 percent of resultant savings for a term not to exceed five years. This may serve to stimulate local municipal governments to indirectly support HAs, since all savings will flow to the HA for the term limit, as opposed to 50 percent to the HA and 50 percent to HUD. After the five-year term is complete, savings would bc shared under the current incentive system.

4. Permit HAs to utilize stipulated energy and water savings for products meeting quantifiable performance standards. This would include efficiency measures such as high performance lighting to replace incandescent type, and low-volume flush toilets to replace high-volume units

using twice as much or more water per flush. Energy swings would be quantified on a comparative fixture basis with reasonable use considered by application (illumination hours per year in the case of lighting or flushes per year in the case of toilets). This will establish an engineered basis for determining resource savings generated from inclusion of efficient fixtures and equipment and would greatly simplify the savings calculations currently required under the HUD performance contract regulations.